2. Laurora G, *et al*. Controllo della progressione dell'arteriosclerosi in soggetti ad alto rischio trattati con mesoglicano: misurazione dell'intima-media. *Minerva Cardioangiol* 1998; **46:** 41–7.
3. Arosio E, *et al*. A placebo-controlled, double-blind study of mesoglycan in the treatment of chronic venous ulcers. *Eur J Vasc Endovasc Surg* 2001; **22:** 365–72.
4. Nenci GG, *et al*. Treatment of intermittent claudication with mesoglycan—a placebo-controlled, double-blind study. *Thromb Haemost* 2001; **86:** 1181–7.

### Preparations

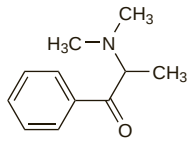
**Proprietary Preparations** (details are given in Part 3)
***Ital.:*** Perclar†; Prisma; ***Port.:*** Prisma.

## Metamfepramone Hydrochloride *(rINNM)* ⊗

Dimepropion Hydrochloride *(BANM)*; Hidrocloruro de metanfepramona; Métamfépramone, Chlorhydrate de; Metamfepramoni Hydrochloridum; Metamfepyramone Hydrochloride. 2-Dimethylaminopropiophenone hydrochloride.

Метамфепрамона Гидрохлорид

$C_{11}H_{15}NO,HCl$ = 213.7.
*CAS — 15351-09-4 (metamfepramone); 10105-90-5 (metamfepramone hydrochloride).*



*(metamfepramone)*

### Profile
Metamfepramone, the dimethyl analogue of diethylpropion (p.2154), is a sympathomimetic that has been used as the hydrochloride in the treatment of hypotension and in preparations for the symptomatic relief of the common cold. It was formerly used as an anorectic agent.

### Preparations

**Proprietary Preparations** (details are given in Part 3)
**Multi-ingredient:** ***Ger.:*** Tempil N.

## Metergoline *(BAN, rINN)*

FI-6337; MCE; Metergoliini; Metergolin; Metergolina; Métergoline; Metergolinum; Methergoline. Benzyl (8*S*,10*S*)-(1,6-dimethylergolin-8-ylmethyl)carbamate.

Метэрголин

$C_{25}H_{29}N_3O_2$ = 403.5.
*CAS — 17692-51-2.*
*ATC — G02CB05.*
*ATC Vet — QG02CB05.*

### Profile
Metergoline, an ergot derivative, is a dopamine agonist with actions and uses similar to those of bromocriptine (p.798). It is also a serotonin antagonist. Metergoline has been used similarly to bromocriptine in disorders associated with hyperprolactinaemia in usual oral doses of 12 mg daily in divided doses; up to 24 mg daily has been given in hyperprolactinaemic men. It has also been used orally to inhibit lactation, for the treatment of gastrointestinal disorders, and for the prophylaxis of migraine and other vascular headaches.

**Hyperprolactinaemia and prolactinomas.** Dopamine agonists have been widely used for the treatment of hyperprolactinaemia secondary to a prolactinoma (p.2079). Metergoline has been tried in patients intolerant of bromocriptine.[1] In this report metergoline lowered plasma-prolactin concentrations, although not to normal, in 3 men and 8 women with hyperprolactinaemia. Galactorrhoea was abolished and/or a regular menstrual cycle established in 5 of the women. Prolactin concentrations and symptoms were unchanged in 3 further women with normoprolactinaemic galactorrhoea.

1. Casson IF, *et al*. Intolerance of bromocriptine: is metergoline a satisfactory alternative? *BMJ* 1985; **290:** 1783–4.

**Migraine.** Although metergoline has been used in some countries for the prophylaxis of migraine (p.616) it is not usually considered to be the drug of choice or even one of the main alternatives.

### Preparations

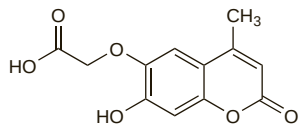
**Proprietary Preparations** (details are given in Part 3)
***Ger.:*** Liserdol; ***Hong Kong:*** Liserdol†; ***Ital.:*** Liserdol; ***Singapore:*** Liserdol†; ***Switz.:*** Liserdol†.

## Metesculetol Sodium *(rINNM)*

Metesculetol sódico; Métesculétol Sodique; Natrii Metesculetolum. [(7-Hydroxy-4-methyl-2-oxo-2*H*-1-benzopyran-6-yl)oxy]acetate sodium.

Натрий Метэскулетол

$C_{12}H_9NaO_6$ = 272.2.
*CAS — 52814-39-8 (metesculetol); 53285-61-3 (metesculetol sodium).*



*(metesculetol)*

### Profile
Metesculetol is included in preparations for peripheral vascular disorders and haemorrhoids. Metescufylline is a compound of metesculetol and etamiphylline (p.1120) that has been given by mouth for its reputed vasoprotectant effect.

### Preparations

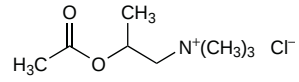
**Proprietary Preparations** (details are given in Part 3)
**Multi-ingredient:** ***Chile:*** Parogencyl Bi-Actif; Vitis Encias Colutorio; Vitis Encias Pasta; ***Fr.:*** Intrait de Marron d'Inde P; Parogencyl gencives fragilisees†; Parogencyl prevention gencives; Parogencyl sensibilite gencives; Veinotonyl; ***Hong Kong:*** Pyodontyl; ***Ital.:*** Parogencyl; Parogencyl Gengive Delicate; ***Mon.:*** Fluon.

## Methacholine Chloride *(BAN, rINN)*

Acetyl-β-methylcholine Chloride; Amechol Chloride; Cloruro de metacolina; Méthacholine, Chlorure de; Methacholini Chloridum; Methacholinium Chloratum. (2-Acetoxypropyl)trimethylammonium chloride.

Метахолиния Хлорид

$C_8H_{18}ClNO_2$ = 195.7.
*CAS — 55-92-5 (methacholine); 62-51-1 (methacholine chloride).*



**Pharmacopoeias.** In *Fr.*, *Swiss*, and *US*.
**USP 31** (Methacholine Chloride). Colourless or white crystals, or a white crystalline powder. It is odourless or has a slight odour, and is very hygroscopic. Soluble 1 in 1.2 of water, 1 in 1.7 of alcohol, and 1 in 2.1 of chloroform. Its solutions are neutral to litmus. Store in airtight containers.

### Adverse Effects and Treatment
As for Acetylcholine Chloride, p.1877. Severe adverse cholinergic effects have followed the oral and parenteral use of methacholine and these routes are no longer used.

### Precautions
As for Neostigmine, p.632.

Methacholine has the potential to produce severe bronchoconstriction and it should not be used for inhalation challenge tests in patients with clinically apparent asthma, wheezing, or poor pulmonary function.

Methacholine should not be given orally or parenterally.

### Interactions
As for Neostigmine, p.632. Methacholine is slowly hydrolysed by acetylcholinesterase, and its effects are markedly enhanced if used after anticholinesterases.

### Uses and Administration
Methacholine is a quaternary ammonium parasympathomimetic with the muscarinic actions of acetylcholine (p.1877). It is hydrolysed by acetylcholinesterase at a considerably slower rate than acetylcholine and is more resistant to hydrolysis by non-specific cholinesterases so that its actions are more prolonged.

Inhalation of nebulised solutions of methacholine chloride are used to provoke bronchoconstriction in the diagnosis of bronchial airway hypersensitivity (but see Precautions, above).

Methacholine chloride has been used in eye drops as a miotic for diagnostic purposes.

◊ References.

1. Crapo RO, *et al*. Guidelines for methacholine and exercise challenge testing-1999. *Am J Respir Crit Care Med* 2000; **161:** 309–29. Also available at: http://ajrccm.atsjournals.org/cgi/reprint/161/1/309 (accessed 30/05/08)
2. Swartz E, Lang D. When should a methacholine challenge be ordered for a patient with suspected asthma? *Cleve Clin J Med* 2008; **75:** 37–40.

### Preparations

**Proprietary Preparations** (details are given in Part 3)
***Canad.:*** Provocholine; ***Ger.:*** Provokit; ***USA:*** Mecholyl; Provocholine.
**Multi-ingredient:** ***Braz.:*** Frixodon†.

## Methiosulfonium Chloride

Methylmethionine Sulfonium Chloride; Metiosulfonio, cloruro de; Vitamin U. (3-Amino-3-carboxypropyl)dimethylsulphonium chloride.

$C_6H_{14}ClNO_2S$ = 199.7.
*CAS — 1115-84-0.*
*ATC — A02BX04.*
*ATC Vet — QA02BX04.*

### Profile
Methiosulfonium chloride has been used for its reputed protective effect on the liver and gastrointestinal mucosa.

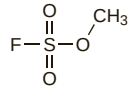
### Preparations

**Proprietary Preparations** (details are given in Part 3)
**Multi-ingredient:** ***Hong Kong:*** Rudd-U†; ***Jpn:*** Cabagin; Cabe 2; The Guard Seichojo; ***Singapore:*** Weisen-U†.

## Methyl Fluorosulfate

Fluorosulfato, metilo de; Magic Methyl; Methyl Fluorosulphate; Methyl Fluorosulphonate.

$CH_3FO_3S$ = 114.1.
*CAS — 421-20-5.*



### Profile
Methyl fluorosulfate has been used as a laboratory methylating agent. Pulmonary oedema has occurred after inhalation, and concern has been expressed concerning possible carcinogenicity.

## Methylenedioxycinnamic Acid

3,4-Methylenedioxycinnamic acid.

$C_{10}H_8O_4$ = 192.2.
*CAS — 2373-80-0.*

### Profile
Methylenedioxycinnamic acid and its potassium salt have been used in preparations for the treatment of liver disorders.

### Preparations

**Proprietary Preparations** (details are given in Part 3)
***Arg.:*** Vacuobil.
**Multi-ingredient:** ***Arg.:*** Vacuobil Plus.

## Methylhydroxyquinoline Metilsulfate

Methylhydroxyquinoline Methylsulphate; Metilhidroxiquinolina, metilsulfato de. 1-Methyl-8-hydroxyquinolinium methyl sulphate.

$C_{10}H_{10}NO,CH_3O_4S$ = 271.3.

### Profile
Methylhydroxyquinoline metilsulfate has been used topically to treat eye irritation.

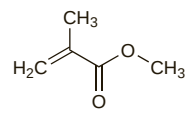
### Preparations

**Proprietary Preparations** (details are given in Part 3)
***Belg.:*** Uvestat; ***Fr.:*** Uveline†.

## Methylmethacrylate

Metacrilato de metilo; Méthacrylate de méthyle; Methylis methacrylas. Methyl 2-methylacrylate; Methyl 2-methylpropenoate.

$C_5H_8O_2$ = 100.1.
*CAS — 80-62-6.*



### Adverse Effects and Precautions
Occupational exposure to methylmethacrylate monomer vapour during preparation of the bone cement may irritate the respiratory tract, eyes, and skin. Cases of occupational asthma have been reported. Contact dermatitis, dizziness, nausea and vomiting may also occur. Methylmethacrylate monomer may be harmful to the liver.